```
① <smil>
②   <head>
③     <layout>
④       <root-layout width="320" height="480" />
⑤         <region id="v" top="5" />
⑥         <region id="t" top="10" />
⑦         <region id="i" top="20" />
⑧     </layout>
⑨   </head>
⑩   </body>
⑪   <par>
⑫     <video reqion="v" src="rtsp://server/sample.mp4/track-ID=1 begin="3s"
    end="20s"/>
⑬     <audio src="rtsp://server/sample.mp4/track-ID=2 begin="3s" end="20s"/>
⑭     <text region="t" src="http://server/text.txt" dur="10s" />
⑮      <image region="i" src="http://server/image.jpg" dur="10s" />
⑯   </par>
⑰   </body>
⑱ </smil>
```

FIG. 1
(PRIOR ART)

10/548081

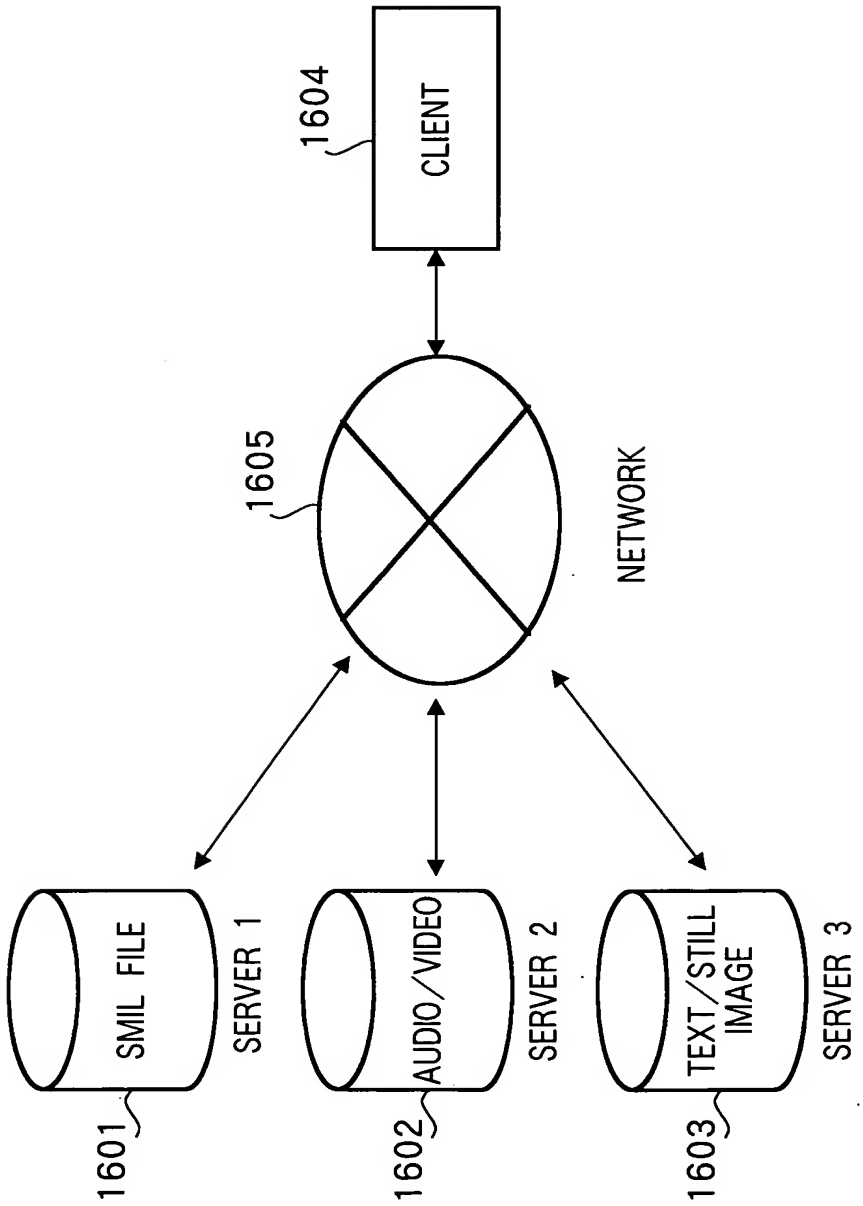

FIG. 2
(PRIOR ART)

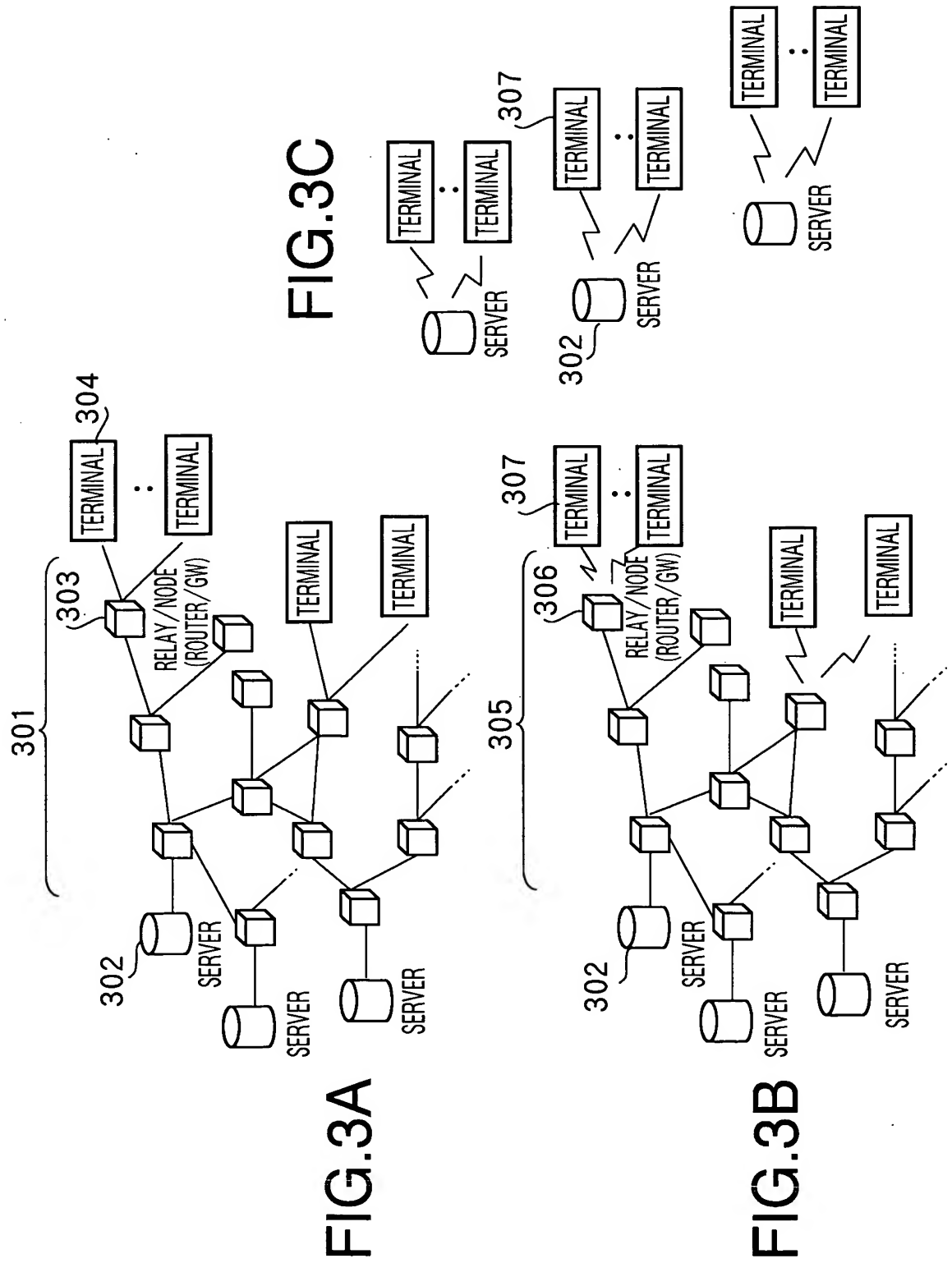

FIG.3C

FIG.3A

FIG.3B

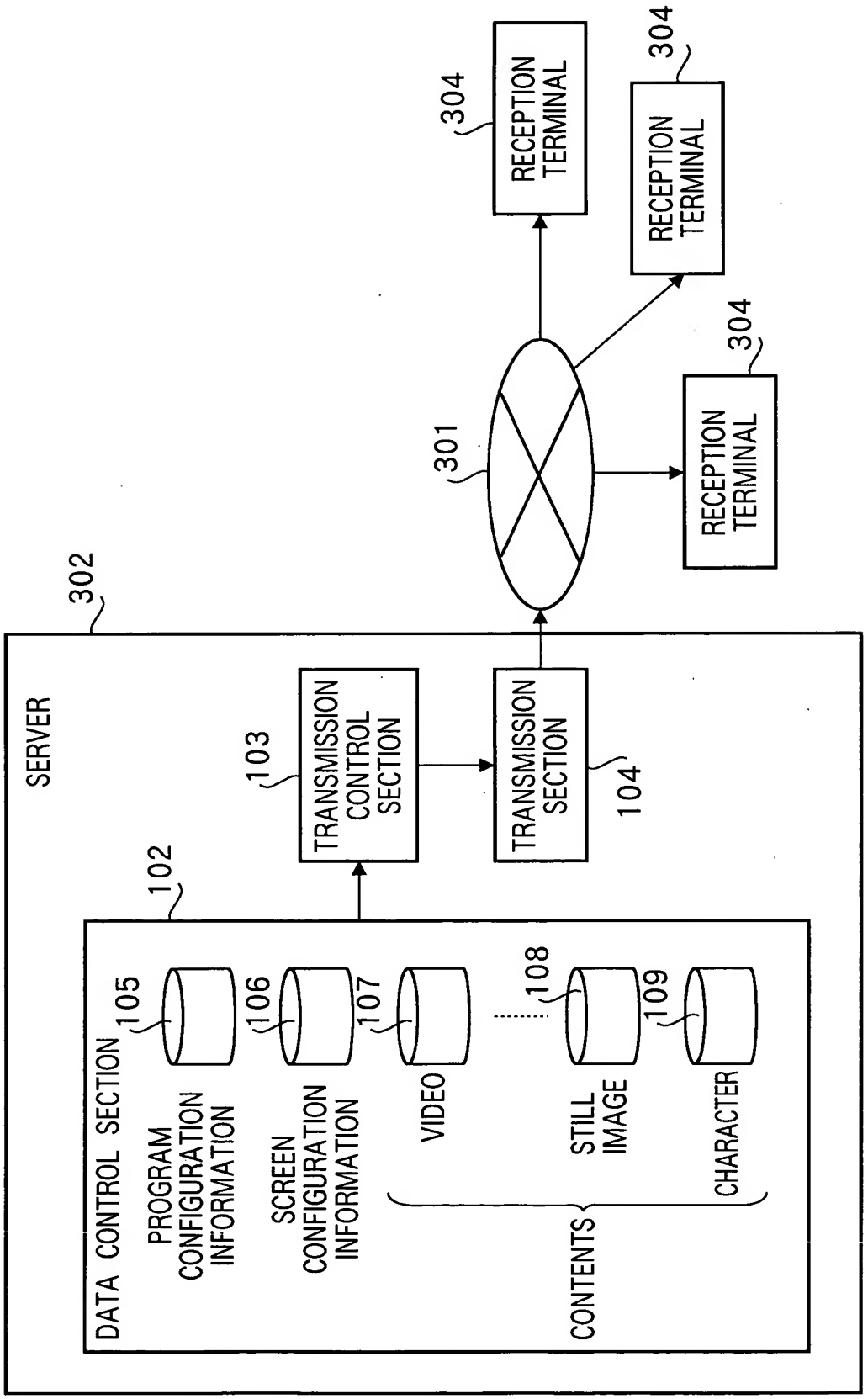
SERVER
302
DATA CONTROL SECTION
102
PROGRAM CONFIGURATION INFORMATION
105
SCREEN CONFIGURATION INFORMATION
106
VIDEO
107
STILL IMAGE
108
CHARACTER
109
CONTENTS
TRANSMISSION CONTROL SECTION
103
TRANSMISSION SECTION
104
301
RECEPTION TERMINAL
304
RECEPTION TERMINAL
304
RECEPTION TERMINAL
304

FIG. 4

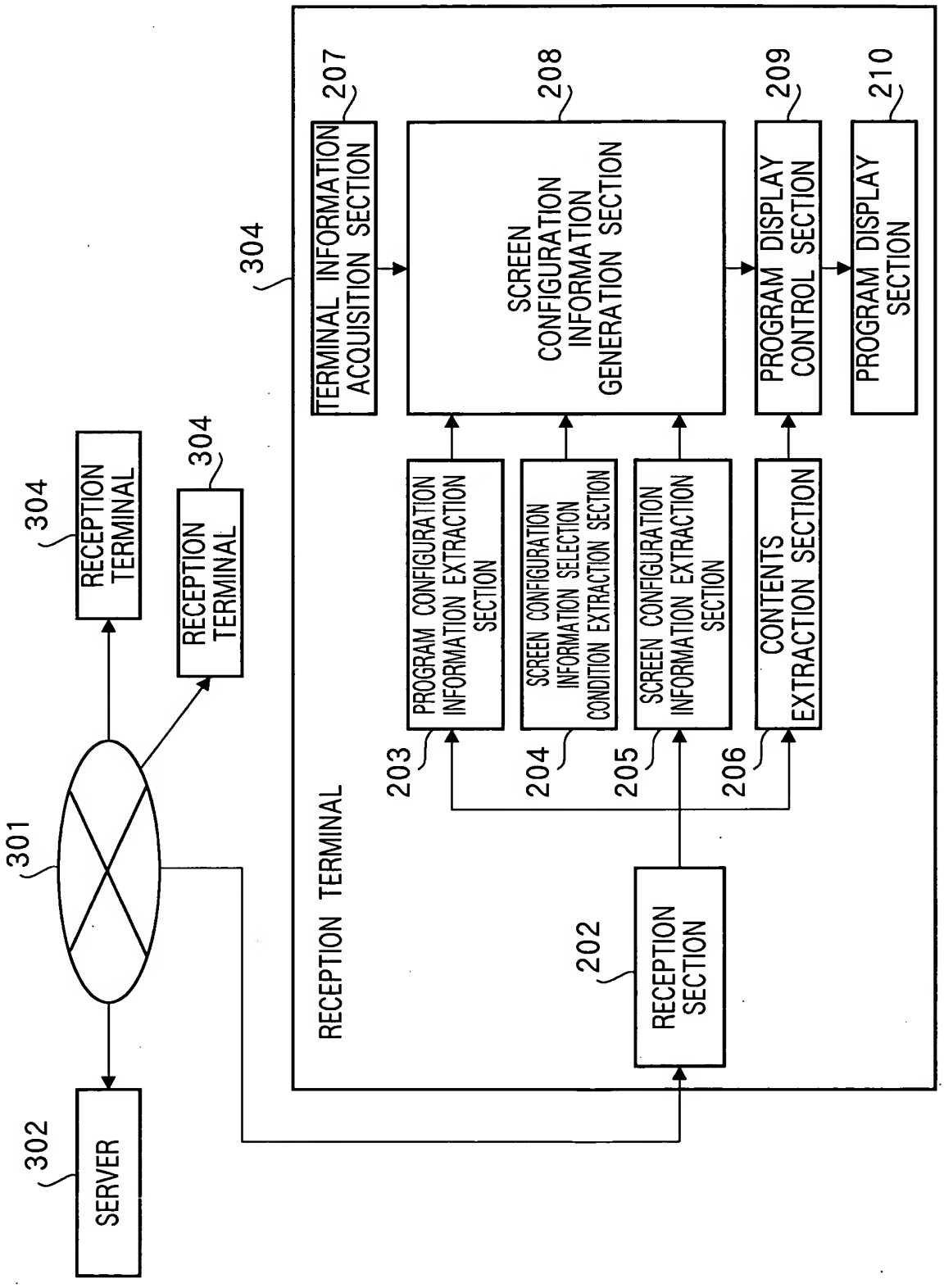
RECEPTION TERMINAL
304
TERMINAL INFORMATION ACQUISITION SECTION
207
SCREEN CONFIGURATION INFORMATION GENERATION SECTION
208
PROGRAM DISPLAY CONTROL SECTION
209
PROGRAM DISPLAY SECTION
210
PROGRAM CONFIGURATION INFORMATION EXTRACTION SECTION
203
SCREEN CONFIGURATION INFORMATION SELECTION CONDITION EXTRACTION SECTION
204
SCREEN CONFIGURATION INFORMATION EXTRACTION SECTION
205
CONTENTS EXTRACTION SECTION
206
RECEPTION SECTION
202
RECEPTION TERMINAL
304
RECEPTION TERMINAL
304
301
SERVER
302

FIG. 5

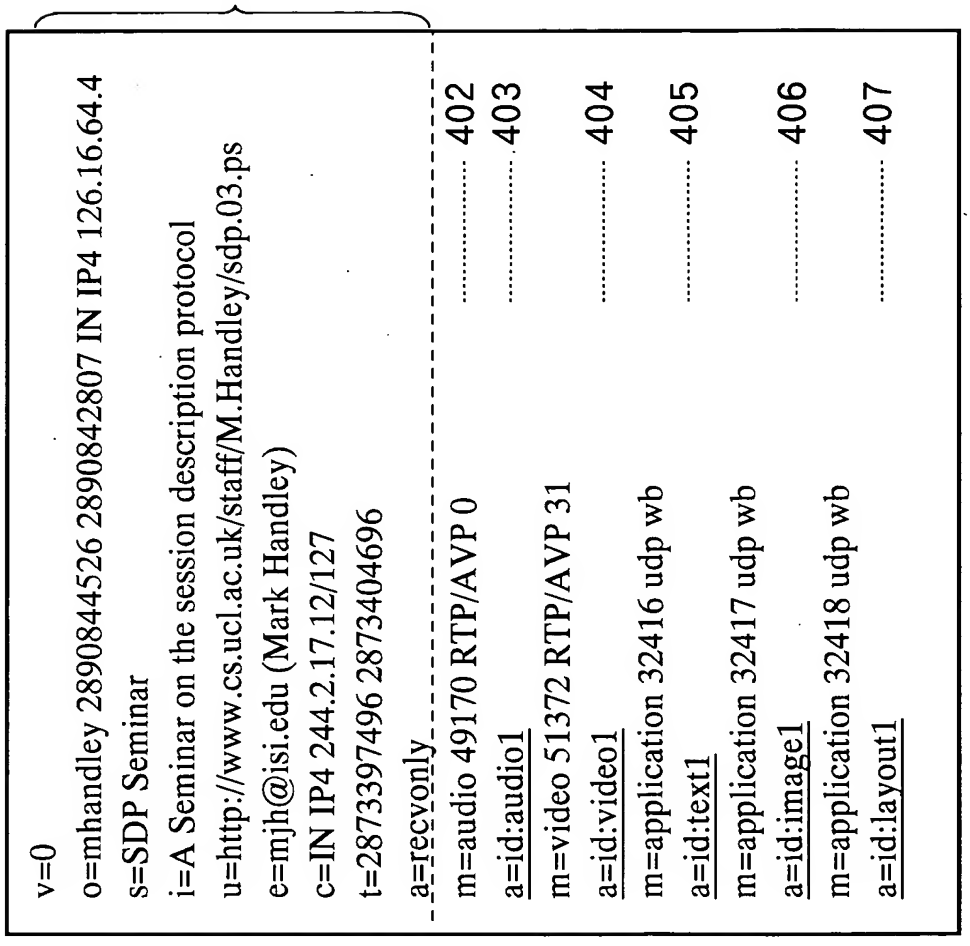
400
401
v=0
o=mhandley 2890844526 2890842807 IN IP4 126.16.64.4
s=SDP Seminar
i=A Seminar on the session description protocol
u=http://www.cs.ucl.ac.uk/staff/M.Handley/sdp.03.ps
e=mjh@isi.edu (Mark Handley)
c=IN IP4 244.2.17.12/127
t=2873397496 2873404696
a=recvonly
m=audio 49170 RTP/AVP 0 402
a=id:audio1 403
m=video 51372 RTP/AVP 31
a=id:video1 404
m=application 32416 udp wb
a=id:text1 405
m=application 32417 udp wb
a=id:image1 406
m=application 32418 udp wb
a=id:layout1 407

FIG. 6

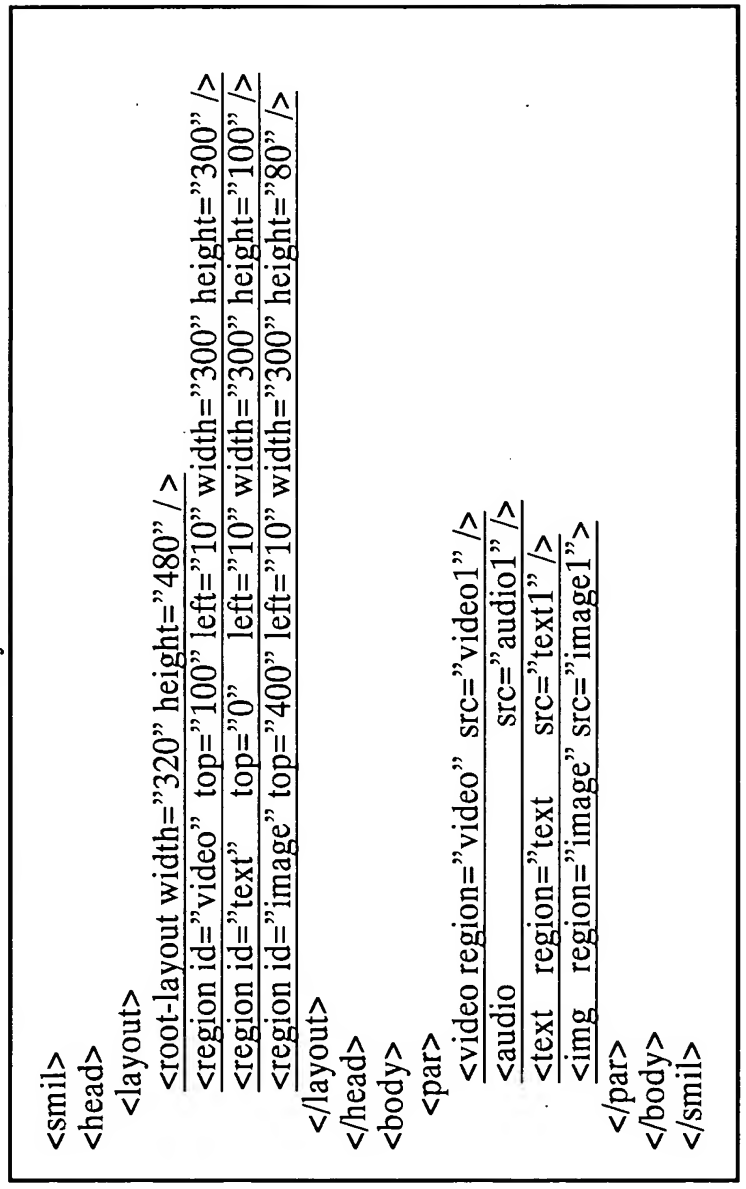
500
layout1
<smil>
<head>
<layout>
<root-layout width="320" height="480" />
<region id="video" top="100" left="10" width="300" height="300" />
<region id="text" top="0" left="10" width="300" height="100" />
<region id="image" top="400" left="10" width="300" height="80" />
</layout>
</head>
<body>
<par>
<video region="video" src="video1" />
<audio src="audio1" />
<text region="text" src="text1" />
<img region="image" src="image1">
</par>
</body>
</smil>
501
502
503
504
505
506
507
508

FIG. 7

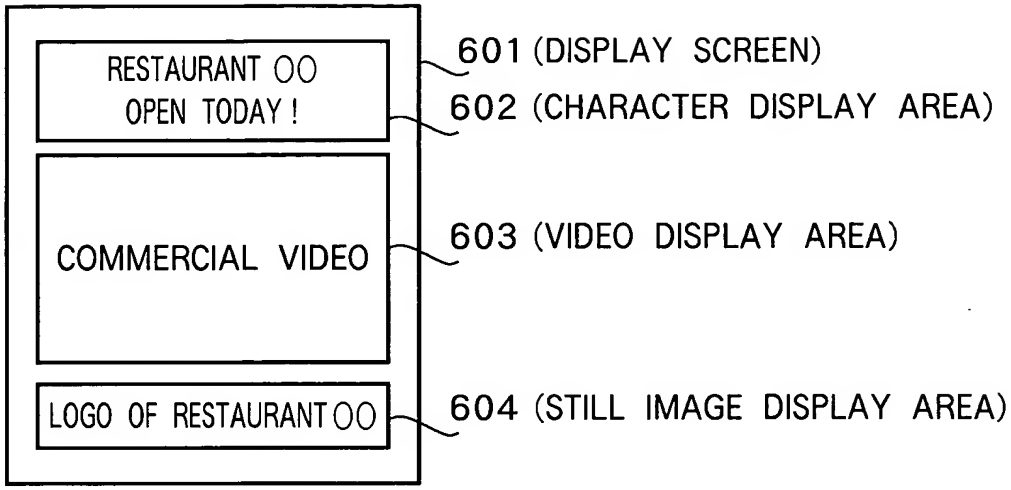

FIG.8A

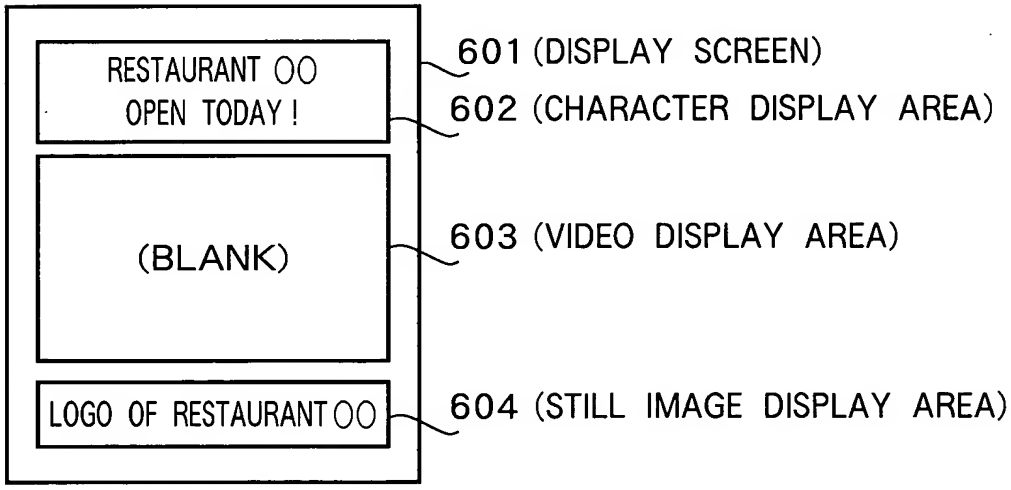

FIG.8B

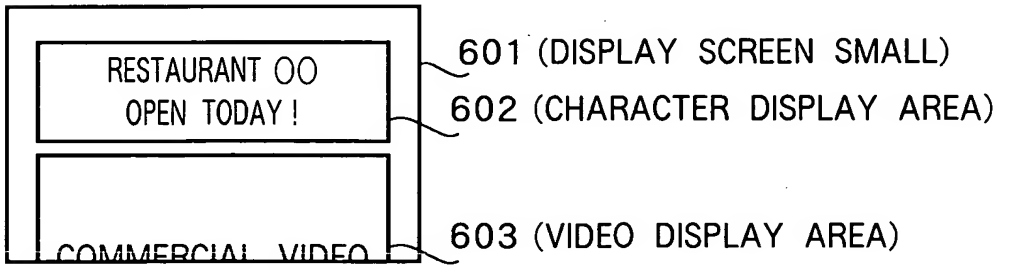

FIG. 9

FIG.10A

800 layout2

```
<smil>
<head>
  <layout>
    <root-layout width="320" height="480" / >                                  ..... 501
    <region id="video"  top="100" left="10" width="300" height="300" />        ..... 502
    <region id="text"   top="0"   left="10" width="300" height="100" />        ..... 503
    <region id="image" top="400" left="10" width="300" height="80" />          ..... 504
 </layout>
</head>
<body>
  <par>
    <text   region="video"  src="text2" />                                     ..... 805
    <audio                  src="audio1" />                                    ..... 506
    <text   region="text"   src="text1" />                                     ..... 507
    <img    region="image" src="image1">                                       ..... 508
 </par>
</body>
</smil>
```

FIG.10B

810 layout3

```
12c12                                                                          ..... 811
<       <text   region="video" src="text2" />                                  ..... 812
---
>       <video region="video" src="video1" />                                  ..... 813
```


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900

```
v=0
o=mhandley 2890844526 2890842807 IN IP4 126.16.64.4
s=SDP Seminar
i=A Seminar on the session description protocol
u=http://www.cs.ucl.ac.uk/staff/M.Handley/sdp.03.ps
e=mjh@isi.edu (Mark Handley)
c=IN IP4 244.2.17.12/127
t=2873397496 2873404696
a=recvonly
m=audio 49170 RTP/AVP 0
a=id:audio1
m=video 51372 RTP/AVP 31
a=id:video1
m=application 32416 udp wb
a=id:text1 ..... 901
m=application 32417 udp wb
a=id:text2 ..... 902
m=application 32418 udp wb
a=id:image1 ..... 903
m=application 32419 udp wb
a=id:layout2 ..... 904
a=bandwidth: — 96000 ..... 905
a=priority:3 ..... 906
m=application 32420 udp wb
a=id:layout3 ..... 907
a=diff:layout2 ..... 908
a=bandwidth:64001 — 384000 ..... 909
a=priority:4 ..... 910
```

FIG.11

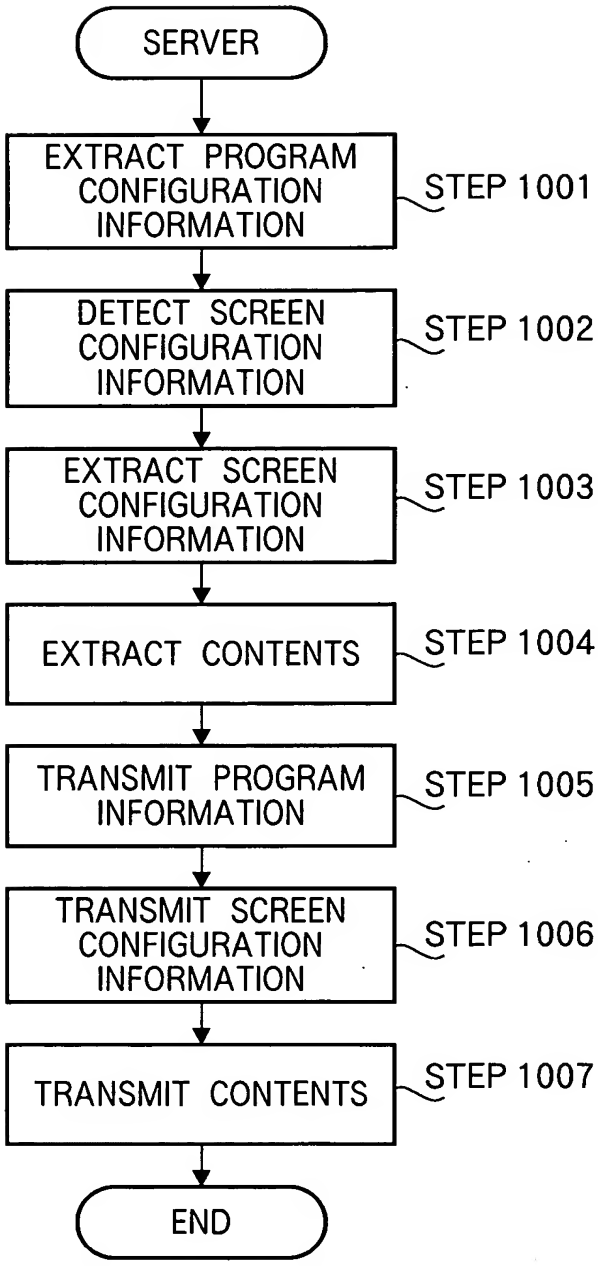
SERVER
EXTRACT PROGRAM CONFIGURATION INFORMATION
STEP 1001
DETECT SCREEN CONFIGURATION INFORMATION
STEP 1002
EXTRACT SCREEN CONFIGURATION INFORMATION
STEP 1003
EXTRACT CONTENTS
STEP 1004
TRANSMIT PROGRAM INFORMATION
STEP 1005
TRANSMIT SCREEN CONFIGURATION INFORMATION
STEP 1006
TRANSMIT CONTENTS
STEP 1007
END

FIG.12

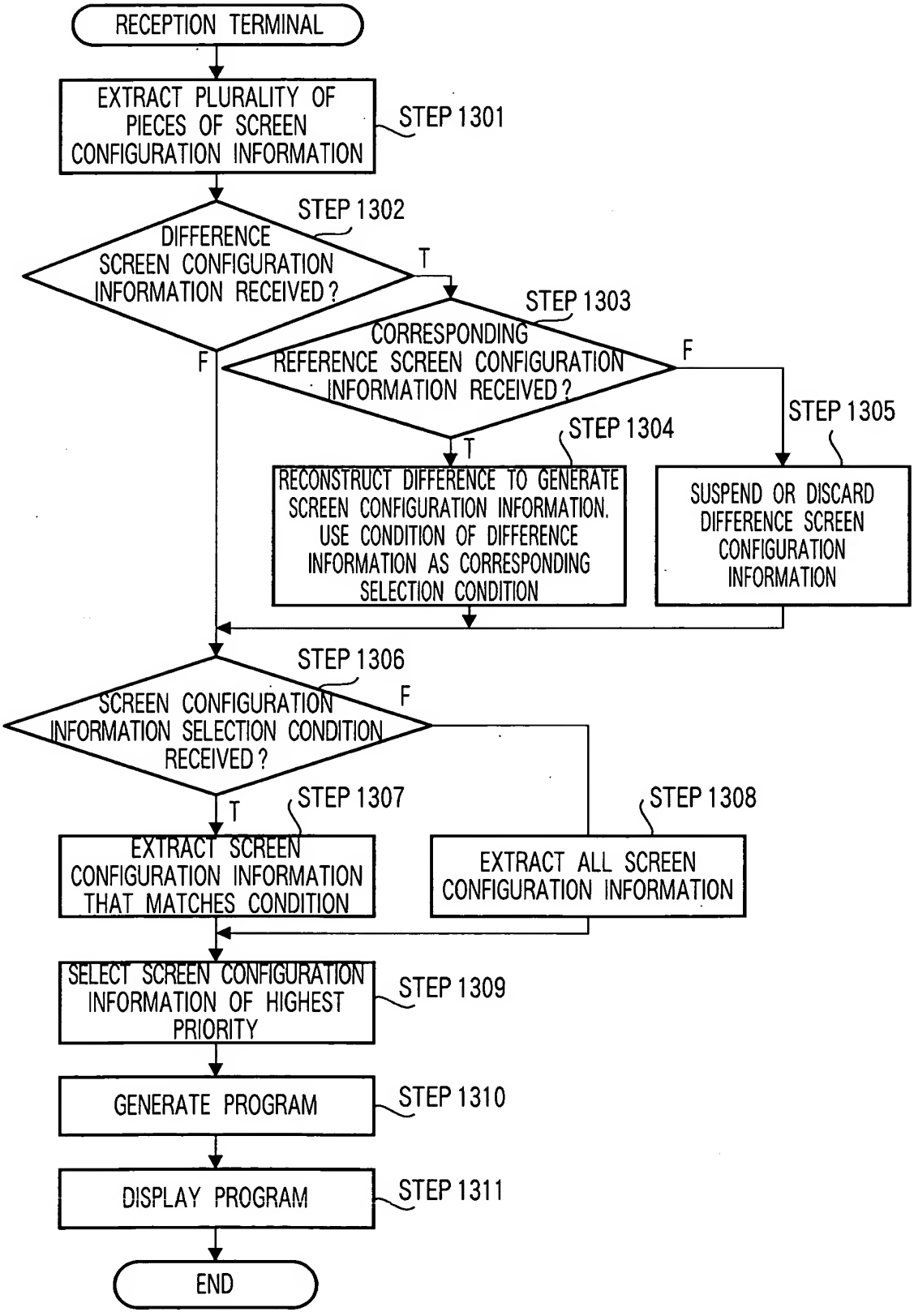
RECEPTION TERMINAL
EXTRACT PLURALITY OF PIECES OF SCREEN CONFIGURATION INFORMATION
STEP 1301
STEP 1302
DIFFERENCE SCREEN CONFIGURATION INFORMATION RECEIVED?
T
F
STEP 1303
CORRESPONDING REFERENCE SCREEN CONFIGURATION INFORMATION RECEIVED?
F
T
STEP 1304
STEP 1305
RECONSTRUCT DIFFERENCE TO GENERATE SCREEN CONFIGURATION INFORMATION. USE CONDITION OF DIFFERENCE INFORMATION AS CORRESPONDING SELECTION CONDITION
SUSPEND OR DISCARD DIFFERENCE SCREEN CONFIGURATION INFORMATION
STEP 1306
SCREEN CONFIGURATION INFORMATION SELECTION CONDITION RECEIVED?
F
T
STEP 1307
STEP 1308
EXTRACT SCREEN CONFIGURATION INFORMATION THAT MATCHES CONDITION
EXTRACT ALL SCREEN CONFIGURATION INFORMATION
SELECT SCREEN CONFIGURATION INFORMATION OF HIGHEST PRIORITY
STEP 1309
GENERATE PROGRAM
STEP 1310
DISPLAY PROGRAM
STEP 1311
END

FIG.13

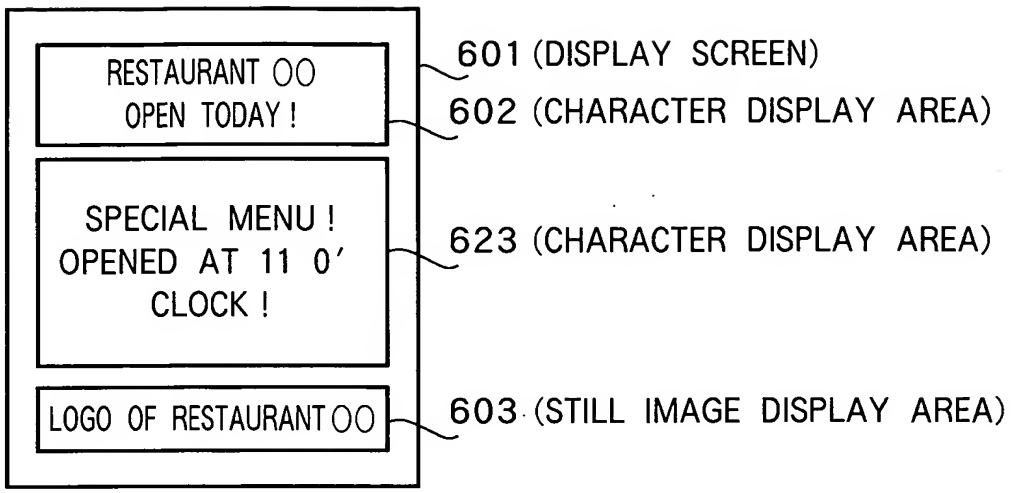
RESTAURANT OO
OPEN TODAY !
SPECIAL MENU !
OPENED AT 11 0′
CLOCK !
LOGO OF RESTAURANT OO
601 (DISPLAY SCREEN)
602 (CHARACTER DISPLAY AREA)
623 (CHARACTER DISPLAY AREA)
603 (STILL IMAGE DISPLAY AREA)

FIG.14

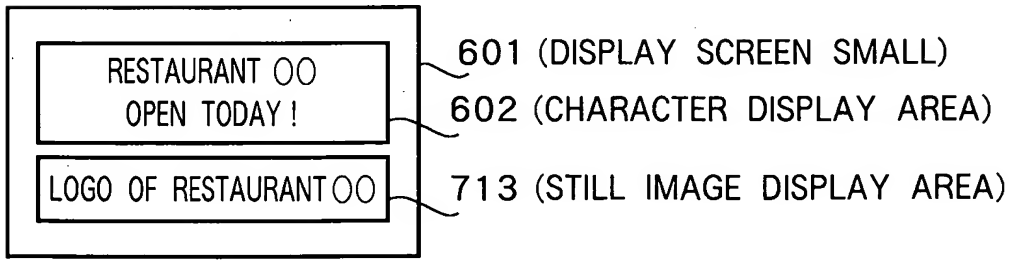
RESTAURANT OO
OPEN TODAY !
LOGO OF RESTAURANT OO
601 (DISPLAY SCREEN SMALL)
602 (CHARACTER DISPLAY AREA)
713 (STILL IMAGE DISPLAY AREA)

FIG.15

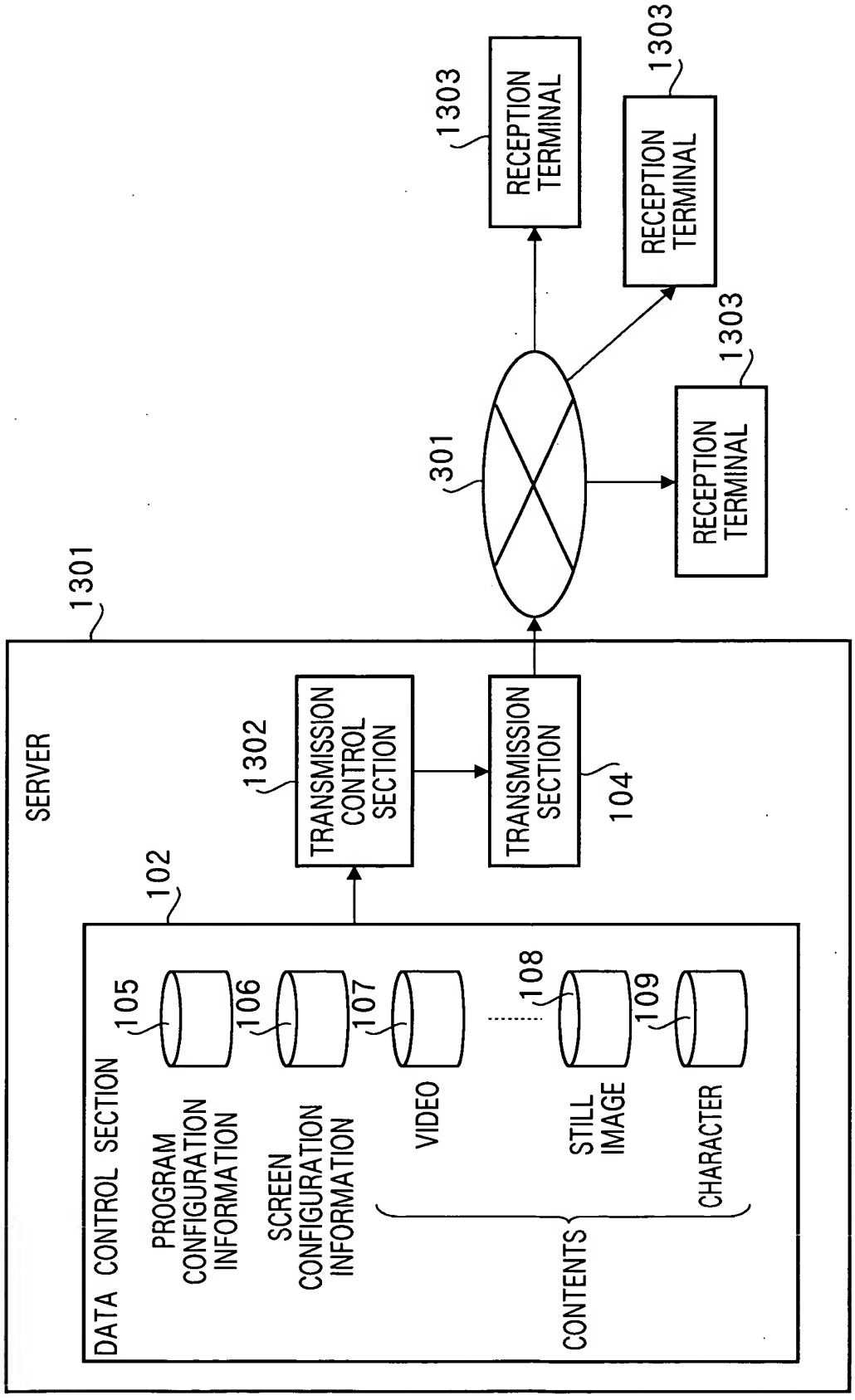
SERVER
1301
DATA CONTROL SECTION
102
PROGRAM CONFIGURATION INFORMATION
105
SCREEN CONFIGURATION INFORMATION
106
VIDEO
107
STILL IMAGE
108
CHARACTER
109
CONTENTS
TRANSMISSION CONTROL SECTION
1302
TRANSMISSION SECTION
104
301
RECEPTION TERMINAL
1303
RECEPTION TERMINAL
1303
RECEPTION TERMINAL
1303

FIG.16

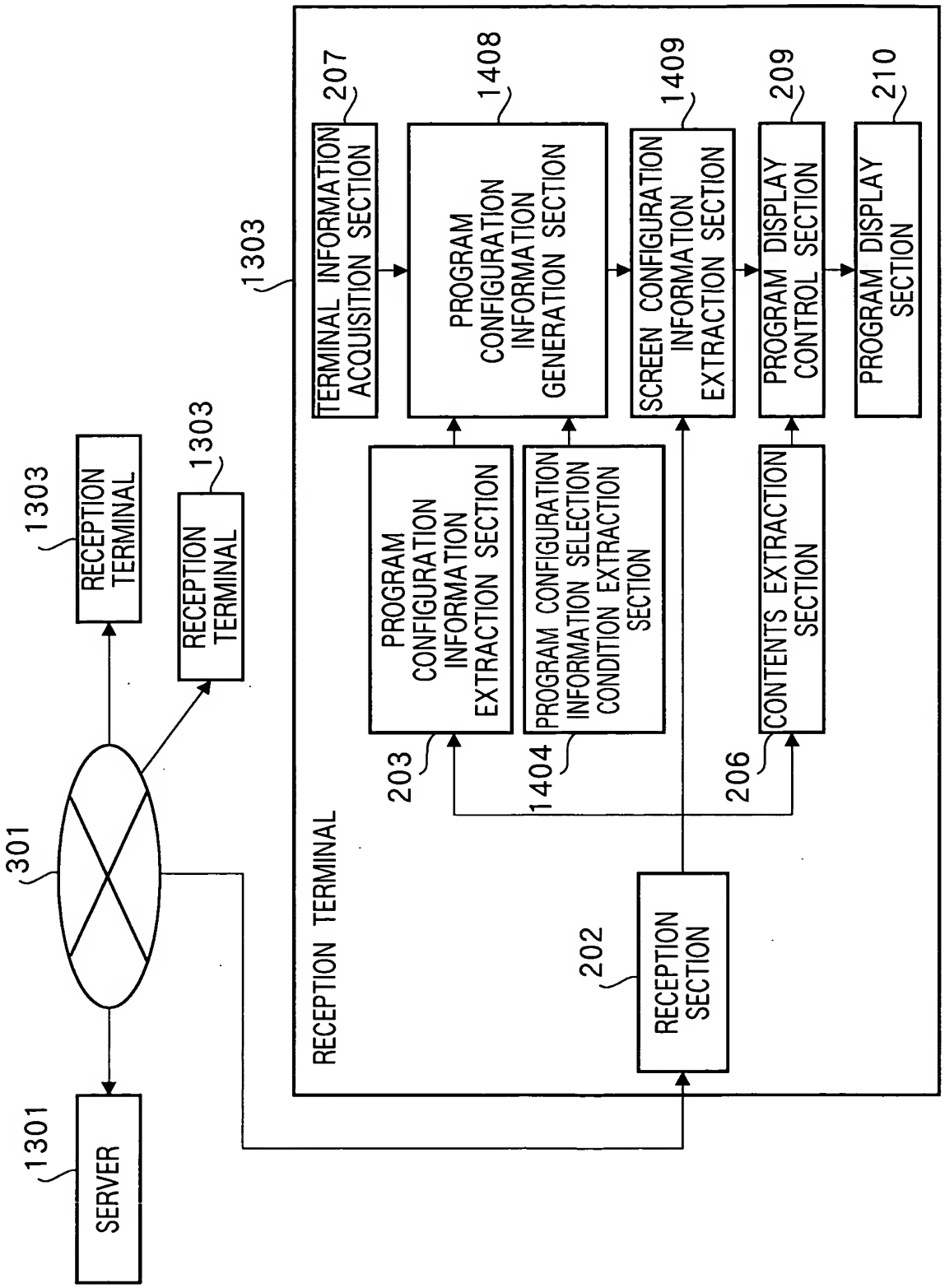
SERVER
1301
RECEPTION TERMINAL
1303
RECEPTION TERMINAL
1303
301
RECEPTION TERMINAL
1303
TERMINAL INFORMATION ACQUISITION SECTION
207
PROGRAM CONFIGURATION INFORMATION GENERATION SECTION
1408
SCREEN CONFIGURATION INFORMATION EXTRACTION SECTION
1409
PROGRAM DISPLAY CONTROL SECTION
209
PROGRAM DISPLAY SECTION
210
PROGRAM CONFIGURATION INFORMATION EXTRACTION SECTION
203
PROGRAM CONFIGURATION INFORMATION SELECTION CONDITION EXTRACTION SECTION
1404
CONTENTS EXTRACTION SECTION
206
RECEPTION SECTION
202

FIG.17

1600

```
v=0
o=mhandley 2890844526 2890842807 IN IP4 126.16.64.4
s=SDP Seminar
i=A Seminar on the session description protocol
u=http://www.cs.ucl.ac.uk/staff/M.Handley/sdp.03.ps
e=mjh@isi.edu (Mark Handley)
c=IN IP4 244.2.17.12/127
t=2873397496 2873404696
a=id:program1 ..... 1001
a=bandwidth:64001 – 384000 ..... 1002
a=priority:4 ..... 1003
a=recvonly
m=audio 49170 RTP/AVP 0
a=id:audio1 ..... 1004
m=video 51372 RTP/AVP 31
a=id:video1 ..... 1005
m=application 32416 udp wb
a=id:text1 ..... 1006
m=application 32417 udp wb
a=id:image1 ..... 1007
m=application 32420 udp wb
a=id:layout1 ..... 1008
```

FIG.18

1700

```
v=0
o=mhandley 2890844526 2890842807 IN IP4 126.16.64.4
s=SDP Seminar
i=A Seminar on the session description protocol
u=http://www.cs.ucl.ac.uk/staff/M.Handley/sdp.03.ps
e=mjh@isi.edu (Mark Handley)
c=IN IP4 244.2.17.12/127
t=2873397496 2873404696
a=id:program2 ..... 1101
a=bandwidth: — 96000 ..... 1102
a=priority:3 ..... 1103
a=recvonly
m=application 32416 udp wb
a=id:text1 ..... 1104
m=application 32417 udp wb
a=id:text2 ..... 1105
m=application 32418 udp wb
a=id:image1 ..... 1106
m=application 32419 udp wb
a=id:layout2 ..... 1107
```

FIG.19

1800

```
v=0
o=mhandley 2890844526 2890842807 IN IP4 126.16.64.4
s=SDP Seminar
t=2873397496 2873404696
a=id:program3 ..... 1201
a=diff:program2 ..... 1202
a=bandwidth:64001 − 384000 ..... 1203
a=priority:4 ..... 1204
a=recvonly
m=audio 49170 RTP/AVP 0
a=id:audio1 ..... 1205
m=video 51372 RTP/AVP 31
a=id:video1 ..... 1206
m=application 32417 udp wb
a=delete:text2 ..... 1207
m=application 32420 udp wb
a=id:layout1 ..... 1208
m=application 32419 udp wb
a=delete:layout2 ..... 1209
```

FIG.20

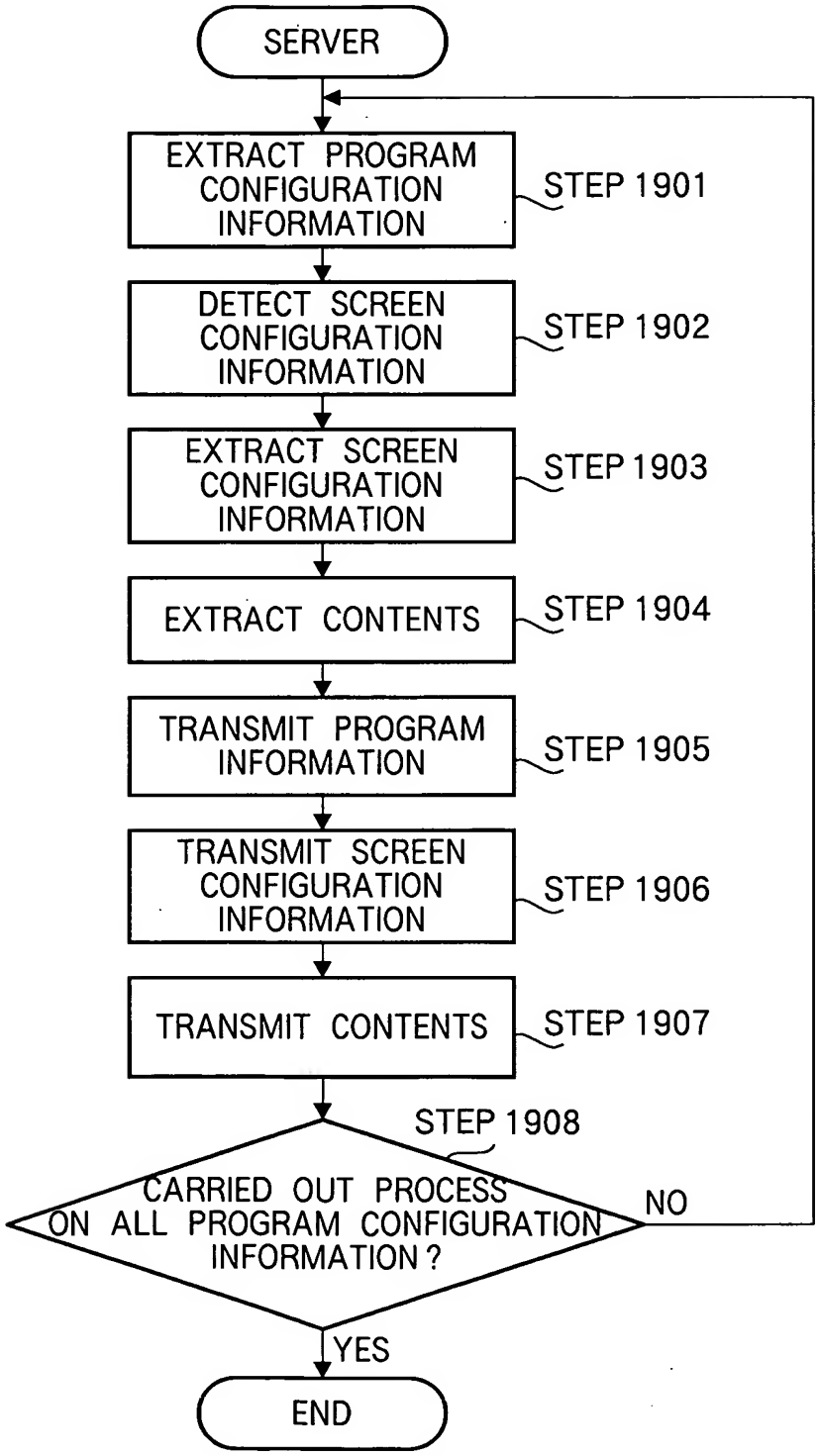
SERVER
EXTRACT PROGRAM CONFIGURATION INFORMATION
STEP 1901
DETECT SCREEN CONFIGURATION INFORMATION
STEP 1902
EXTRACT SCREEN CONFIGURATION INFORMATION
STEP 1903
EXTRACT CONTENTS
STEP 1904
TRANSMIT PROGRAM INFORMATION
STEP 1905
TRANSMIT SCREEN CONFIGURATION INFORMATION
STEP 1906
TRANSMIT CONTENTS
STEP 1907
STEP 1908
CARRIED OUT PROCESS ON ALL PROGRAM CONFIGURATION INFORMATION ?
NO
YES
END

FIG.21

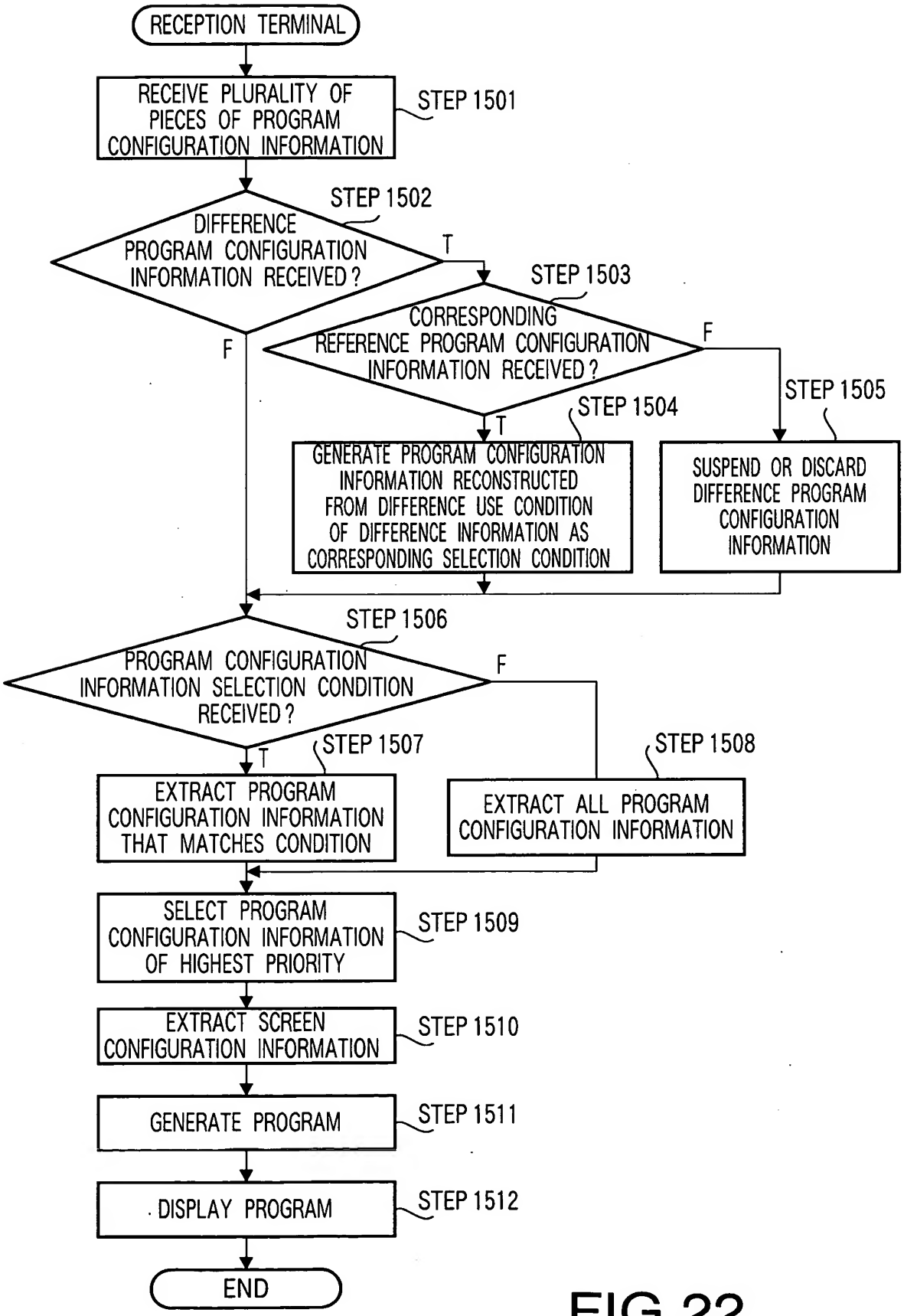
RECEPTION TERMINAL
RECEIVE PLURALITY OF PIECES OF PROGRAM CONFIGURATION INFORMATION
STEP 1501
STEP 1502
DIFFERENCE PROGRAM CONFIGURATION INFORMATION RECEIVED?
T
F
STEP 1503
CORRESPONDING REFERENCE PROGRAM CONFIGURATION INFORMATION RECEIVED?
F
T
STEP 1504
STEP 1505
GENERATE PROGRAM CONFIGURATION INFORMATION RECONSTRUCTED FROM DIFFERENCE USE CONDITION OF DIFFERENCE INFORMATION AS CORRESPONDING SELECTION CONDITION
SUSPEND OR DISCARD DIFFERENCE PROGRAM CONFIGURATION INFORMATION
STEP 1506
PROGRAM CONFIGURATION INFORMATION SELECTION CONDITION RECEIVED?
F
T
STEP 1507
STEP 1508
EXTRACT PROGRAM CONFIGURATION INFORMATION THAT MATCHES CONDITION
EXTRACT ALL PROGRAM CONFIGURATION INFORMATION
SELECT PROGRAM CONFIGURATION INFORMATION OF HIGHEST PRIORITY
STEP 1509
EXTRACT SCREEN CONFIGURATION INFORMATION
STEP 1510
GENERATE PROGRAM
STEP 1511
DISPLAY PROGRAM
STEP 1512
END

FIG.22